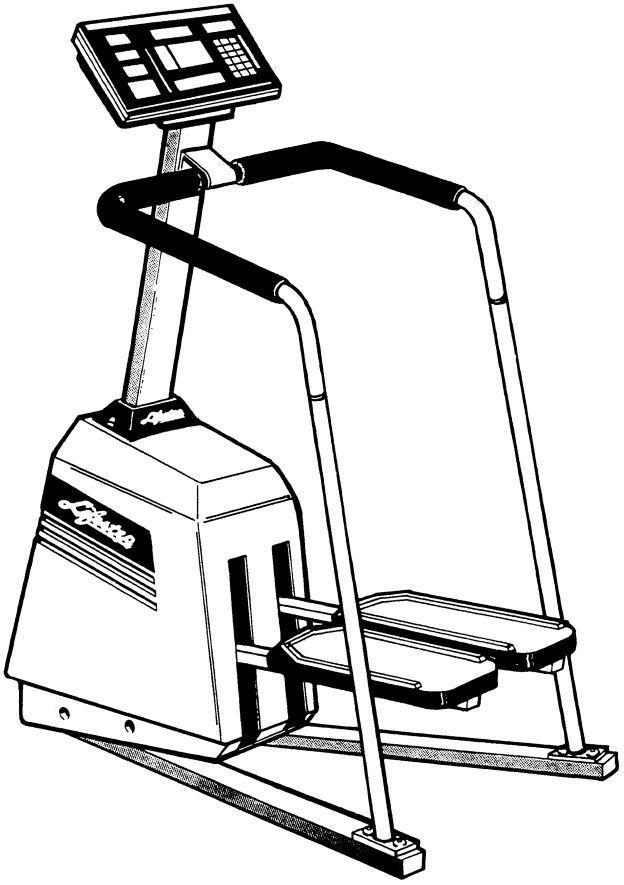
Lifestep® 9100

OPERATION MANUAL



HOW TO GET THE MOST OUT OF YOUR LIFESTEP® AEROBIC TRAINER

POSSIBLE RADIO/TELEVISION INTERFERENCE

NOTE: This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, this product may cause harmful interference to radio communications. There is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- ❒ Reorient or relocate the receiving antenna.
- ❒ Increase the space between the equipment and the receiver.
- ❒ Connect the equipment to an outlet on a different circuit than that to which the receiver is connected.
- ❒ Consult the dealer or an experienced Radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Introduction

HOW TO GET THE MOST OUT OF YOUR LIFESTEP® WORKOUT

Congratulations...and welcome to the world of Life Fitness and the Lifestep aerobic trainer.

Your new aerobic trainer is the culmination of over 20 years of technological innovation. Today, it is recognized as the world's most popular and most advanced computerized stepping machine.

Like other Life Fitness products, the Lifestep aerobic trainer is designed to provide you with an effective workout that is both motivating and time efficient, without the stress and strain on legs and joints caused by other types of exercises like running or jogging. A user friendly console provides a host of visual feedback in addition to acting as a "coach" with easy to follow prompt instructions.

Who uses the Lifestep aerobic trainer? People who value time and who need to make every minute count. Olympic athletes, movie stars, busy executives, top government administrators, sports celebrities and housewives all make the Lifestep trainer their exercise choice. Whether at a fitness facility, at home or at the office, using the Lifestep is an excellent way to lose weight and improve your cardiorespiratory condition, and it's fun!

Why use a Lifestep aerobic trainer? Aerobic training with a Lifestep aerobic trainer is more than just a motivating experience. Regular aerobic exercise improves energy and endurance, reduces body fat, lowers your probability of heart disease, and tends to prolong life.* Consistent workouts can also diffuse the effects of everyday stress. Competitive athletes train aerobically to increase their heart strength, lung capacity and muscular endurance.

Read this manual now. Before beginning your Lifestep Aerobic Exercise Plan (PEP), it is essential that you read this entire manual. It explains how to operate your Lifestep , and helps you design an aerobic workout tailored to your aerobic fitness needs.

If you have further questions regarding the operation of your Lifestep trainer, please call THE LIFE FITNESS PRODUCT SUPPORT CENTER toll free at (800) 351-3737. In Illinois call (708) 451-0036.

*Paffenbarger, R.S. Jr., Hyde, R.T., Wing, A.L., et al: Physical Activity, All-cause Mortality, and Longevity of College Alumni. N Engl J Med 1986:314(March 6):605-613.

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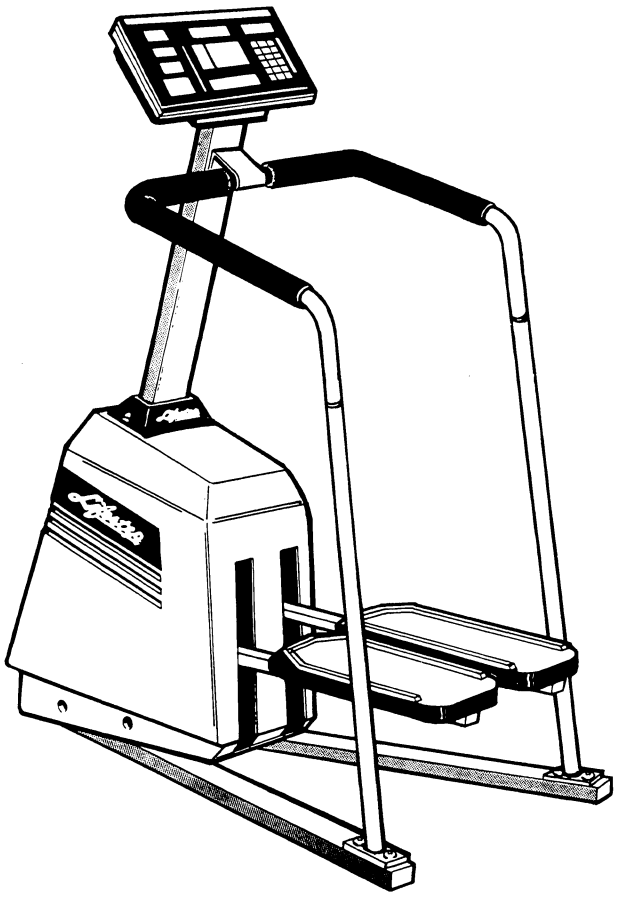

The Lifestep model 9100 aerobic trainer is lightweight, easy to move, and features the same motivating Hill Profile program, found on the Lifecycle aerobic trainer, which has attracted thousands of loyal users in health clubs around the world. Your Lifestep aerobic trainer pedals are dependent or "linked," rather than independent. This imitates the natural, rhythmic motion of real stair climbing. And, linked pedals allow you to stand still on the machine at any time without the pedals sinking to the floor and shutting off the program. The dependent pedal design allows you to control the speed and step height, instead of forcing you to keep up with the machine's pace.

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FIGURES

TABLES

Important Safety Instructions

PLEASE READ THIS MANUAL NOW.

It is essential that you read this entire manual. It explains the design philosophy of the Lifestep trainer, how to operate it and ways to tailor aerobic workout plans to meet your personal fitness objectives.

If you have further questions regarding your Lifestep aerobic trainer, please call Life Fitness Product Support at (800) 351-3737 toll free or (708) 451-0036.

DANGER: To reduce the risk of electrical shock, always unplug the Lifestep unit from the electrical outlet or the electrical power supply cord before cleaning or attempting any maintenance activity.

WARNING: To reduce the risk of burns, fire, electrical shock, or aerobic injury, it is imperative that you CONNECT EACH LIFESTEP UNIT TO A PROPERLY GROUNDED OUTLET. (See Grounding Instructions Page 8)

SAFETY FIRST

1. The Lifestep aerobic training unit can be left on by remaining plugged in. When initiating any maintenance or service activities, simply turn the machine off by removing the plug from the electrical outlet. Grip the plug firmly and pull it out of the outlet. Do not disengage the plug from the outlet by pulling on the cord.
2. The equipment is for use only by adults. Close supervision and appropriate measures should be taken to prevent spectators or pets from interfering in any way while an exercise routine is in progress.
3. Each Lifestep aerobic trainer is intended to be used in the manner described in this manual.
4. Never operate a Lifestep unit if it has a damaged cord or electrical plug, if it has been dropped or damaged, or if it has been immersed in water, even partially. Contact Life Fitness Product Support for examinations and repairs.
5. Keep the electrical cord away from heated surfaces.
6. Do not carry the Lifestep unit by the power cord or use the cord as a handle.

7. Never operate the Lifestep unit with the pedal openings blocked. Keep the pedal openings free of lint, hair or any obstructing materials.
8. Never drop or insert objects into any opening in the Lifestep unit.
9. Never place liquids of any type on the Lifestep unit.
10. Do not use the Lifestep aerobic trainer outdoors.
11. Do not use the unit in areas where aerosol spray products are being used or where oxygen is being administered. Such substances increase the danger of combustion or explosion.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Grounding Instructions

The Lifestep aerobic trainer must be properly grounded. If the unit malfunctions or breaks down, proper grounding provides a path of least resistance for electrical current, which reduces the risk of electrical shock to someone touching or using the unit. Each unit is equipped with an electrical cord which includes an equipment grounding conductor and a grounding plug. The plug must be inserted into an appropriate outlet (Figure 1) that is properly installed and grounded in accordance with all local codes and ordinances.

Figure 1: Proper Grounding

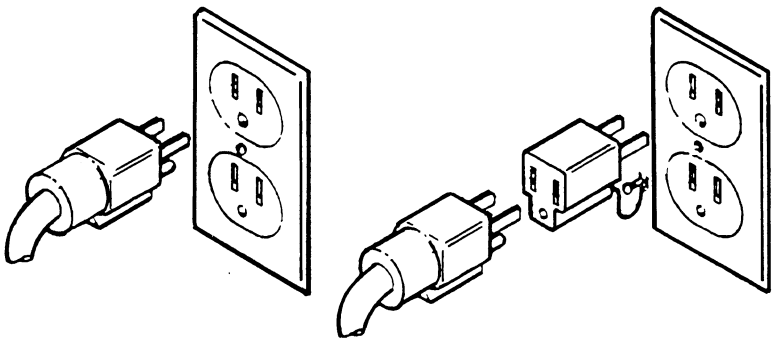


Illustration A Illustration B

This product is for use on a normal 120-volt electrical circuit, and has a grounding plug that looks like the plug depicted in illustration A in Figure 1. A temporary adapter, similar to the adapter in illustration B, may be used to connect this plug to a 2-pole receptacle if a properly grounded outlet is not available. THE TEMPORARY ADAPTER SHOULD BE USED ONLY UNTIL A PROPERLY GROUNDED OUTLET (FIGURE 1A) CAN BE INSTALLED BY A QUALIFIED ELECTRICIAN. THE GREEN EAR OR LUG MUST BE CONNECTED TO A PERMANENT GROUND SUCH AS A PROPERLY GROUNDED BOX COVER. IT MUST BE HELD IN PLACE SECURELY BY A METAL SCREW.

DANGER: A risk of electrical shock may result from improper connection of the equipment-grounding conductor. Check with a qualified electrician or serviceman if you are in doubt as to the proper grounding technique. Do not modify the plug provided with the product. If it will not fit your electrical outlet, have a proper outlet installed by a qualified electrician.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

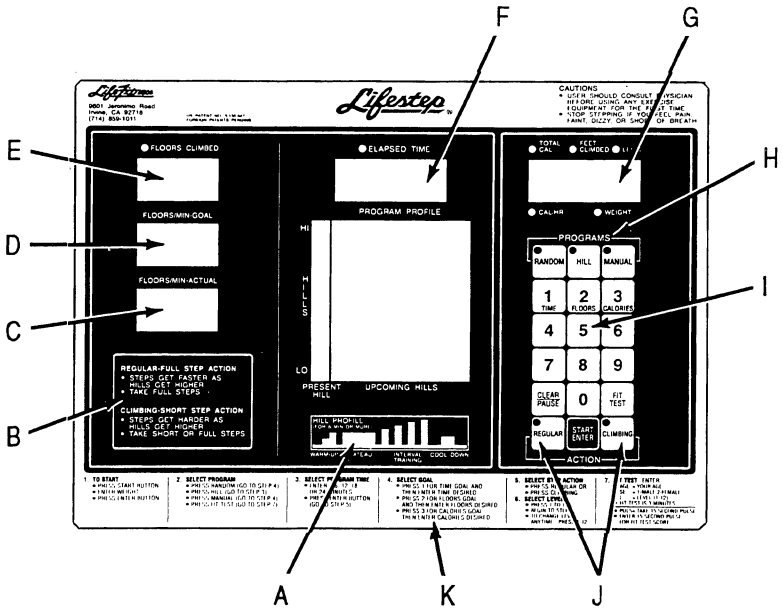
How to Use the Display Console

The Lifestep aerobic trainer's computerized display console allows you to watch your progress as you step.

The on-board computer lets you tailor your workout to your individual fitness capabilities and provides a unique means of measuring your fitness improvement from one workout to the next. You'll want to challenge yourself by gradually increasing exercise intensity and exercise time as your endurance improves.

The display console is simple to program and easy to use.

Figure 2: Display Console



A. HILL PROFILE GRAPHIC DIAGRAM: This graphic diagram shows the hills and valleys encountered when you select the Hill Profile program, a patented, scientifically developed interval training system unique to the Lifestep. With the Hill Profile, you have a choice of 9 timed programs ranging form 1 to 24 minutes, and 12 different levels of intensity (difficulty). The Hill Profile graphic diagram does not apply to either the Random or Manual programs.

B. CLIMBING ACTIONS SUMMARIZED: Describes and compares the Regular - Full Step Action and the Climbing - Short Step Action.

C. FLOORS PER MINUTE-ACTUAL: . Shows your actual floors-per-minute pace. In the Regular Action mode, you should attempt to keep this figure as close to the floors per minute goal display as possible, to make sure you receive the optimal aerobic benefits from your workout.

D. FLOORS PER MINUTE- GOAL: In the Regular Action mode, shows you the floors per minute rate at which you should be stepping based on the program selection, effort level and time duration you have selected. If you are stepping above or below the floors per minute goal, the numbers displayed in this window will begin to flash. Also, you will hear "beeps" if you drop below your floors per minute goal. The floors-per-minute goal is not displayed in the Climbing Action mode.

E. FLOORS CLIMBED: Shows you the floors climbed when the FLOORS CLIMBED LED is on. The maximum number of floors is 999.

F. ELAPSED TIME WINDOW: Indicates your elapsed exercising time. This window also functions as a stop watch when checking your pulse. (This feature is activated when the FIT TEST key is pressed. See page 39 for specific instructions on how to use the Fit Test feature.)

G. DATA ENTRY/MULTIFUNCTION WINDOW: The LED readouts show level chosen, estimated number of calories burned per hour, total floors and feet climbed, and cumulative number of calories burned . The readout automatically toggles between these five readouts in 10 second intervals. These readouts are not displayed in the Hill Profile program for workouts of durations less than six minutes. Additionally, it will display the total calorie and feet climbed readouts momentarily at the end of your workout. This window also displays the FIT Test prompts.

THE WATTS OPTION: To view a display of watts, a unit of energy expended while exercising, press START, then press 0, prior to selecting your program. This measurement is approximately 1/4 of the calories-per-hour readout.

H. PROGRAM KEYS:

HILL PROFILE KEY: The Hill Profile alternates maximum-effort aerobic training with regular low-intensity intervals to yield the greatest cardiorespiratory improvement in the least amount of time. You can ride the HILL PROFILE at a level of difficulty ranging from 1 to 12 and durations of 1 through 6, 12, 18 or 24 minutes. Each Hill Profile program, with a duration of 6 minutes or more, is comprised of four periods:
1) Warm-Up, 2) Plateau, 3) Interval Training and 4) Cool-Down.

RANDOM PROGRAM KEY: The Random program offers over one million different combinations of hill and valley profiles. You can ride the Random program for durations of 1-60 minutes at a level of difficulty

ranging from 1 to 12. The level of difficulty can be changed at any time during the exercise by simply entering another number.

MANUAL PROGRAM KEY: The Manual program offers a constant step rate or resistance level depending on your step action - Regular or Climbing. The program runs from 1-60 minutes at a level of difficulty ranging from 1 to 12. The step rate or resistance level is equal in intensity to the highest hill encountered on the standard Hill Profile program at the same intensity level.

I. KEYPAD: The keypad is used to enter workout duration, user weight, effort level, and any of the three Lifestep programs. The Hill Profile program has durations of 1-6, 12, 18 or 24 minutes. The Manual and Random programs have durations of 1-60 minutes. The keypad is also used to select a level of difficulty 1 to 12 or to enter Fit Test information (heart rate, age, sex and weight).

START-ENTER KEY: Press this key to begin a workout or to enter information when programming a workout. This key is also used to enter information utilized by the FIT TEST scoring feature.

FIT TEST KEY: This key is used to calculate your relative level of cardiorespiratory fitness. See page 26 for complete instructions before attempting to operate this unique feature.

CLEAR KEY: Pressing this key twice resets the unit and allows you to begin the programming sequence again.

J. STEP ACTION KEYS: These keys are used to choose a step action, either the Regular - Full Step Action in which the steps get *faster* as the hills get higher, or the Climbing - Short Step Action in which the steps become more *difficult* as the hills get higher. The Climbing Action mode allows you to take short or full steps, whereas the Regular Action mode was designed for a full step action.

K. INSTRUCTIONS SUMMARIZED: Written instructions on how to start the Lifestep trainer and operate the programs.

Figure 3: Selection of Hill, Random or Manual Programs

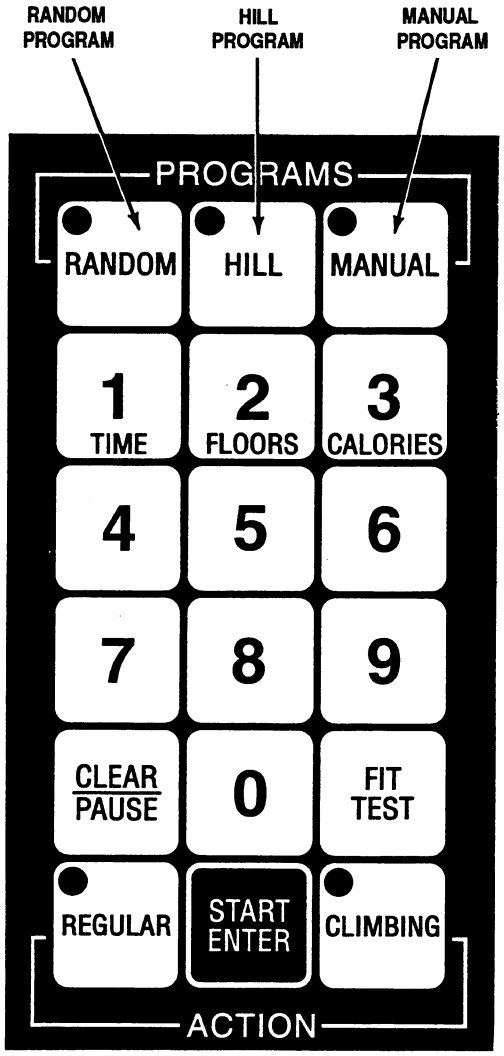
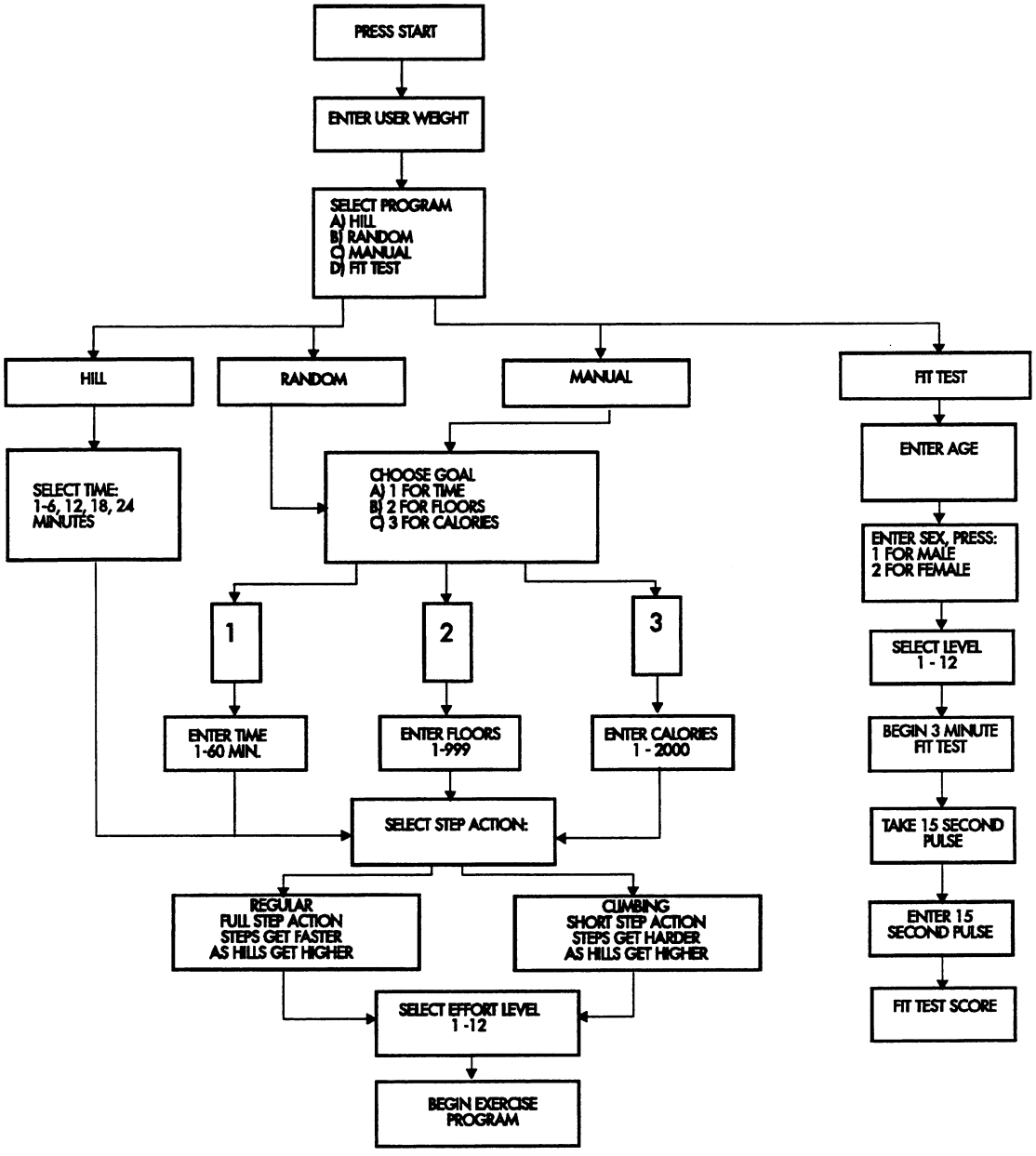


Figure 4: Lifestep Trainer Operation Flow Chart



Operating Instructions Summarized

Selecting a Lifestep workout program is simple. Once you've become familiar with programming your workout, the process can be completed in as little as 30 seconds.

- ❒ To begin simply press the START-ENTER key.
- ❒ If you wish to have watts (energy expended) displayed, in addition to calories per hour and total calories, press 0, then ENTER.
- ❒ The weight LED will flash. Enter current weight using the numeric keypad on the console, then press the ENTER key. Weight data is necessary to properly calibrate your caloric burn information.
- ❒ The PROGRAM LEDs will flash. Press one of the three lit program keys marked HILL , RANDOM or MANUAL, or select FIT TEST.

Hill Profile

- ❒ After pressing the HILL key, the ELAPSED TIME LED will flash. Enter your desired workout time, either 1-6, 12, 18 or 24 minutes.
- ❒ The two ACTION keys will flash, prompting you to select your desired step action - REGULAR or CLIMBING. Enter your desired step action.

— REGULAR - FULL STEP ACTION - steps get FASTER as hills get higher.

— CLIMBING - SHORT STEP ACTION - steps get HARDER as hills get higher.

- ❒ The LEVEL LED will flash, requesting you to select an effort level. Beginners should start with a low level and work toward higher levels. Level 1 is the slowest pace and the lowest effort level and 12 is the fastest pace and the highest effort level. Enter a level and press the START-ENTER key. Begin stepping at a comfortable pace.

Random or Manual

- ❒ The Lifestep console will allow you to customize your program to either a specific amount of time, a specific number of floors to climb, or a specified number of calories to burn.
- ❒ Press 1 for a program based on time, 2 for floors, and 3 for calories.
- ❒ Enter your time, floors, or calories goal as desired and press ENTER.
- ❒ The two ACTION keys will flash, prompting you to select your desired step action - REGULAR or CLIMBING. Enter your desired step action.
- — REGULAR - FULL STEP ACTION - steps get FASTER as hills get higher.
- — CLIMBING - SHORT STEP ACTION - steps get HARDER as hills get higher.
- ❒ The LEVEL LED will flash. Using the keypad, enter a level from 1 to 12 and press the START-ENTER key. Begin stepping at a comfortable pace.

CAUTION: Before using this product, please familiarize yourself with the context of the manual for complete operating instructions. Also, anyone starting a vigorous exercise regimen should see a physician for a medical exam. To acclimate your body to the Lifestep, begin a gradual exercise regimen. At first, you may feel some soreness in the knees and legs. This soreness should subside. However, if the soreness continues or you feel pain, faint or short of breath, stop stepping and consult a physician.

How to Choose A Computerized Workout Program

Three computerized programs are available on your Lifestep aerobic trainer:

1. **The Hill Profile Program**
2. **The Random Program**
3. **The Manual Program**

The Hill Profile Program

The Lifestep aerobic trainer's patented Hill Profile program (See Figure 5 on page 18) offers the ideal configuration for interval training; that is, periods of high-effort aerobic activity separated by regular intervals of low-intensity exercise. The Hill Profile program is available in various durations from 1 to 24 minutes. The longer the Hill Profile program, the longer the amount of time spent on top of a hill or at the bottom of a valley. You may find two 12 minute programs easier than the 24 minute program because the hill climbing duration is shorter. You can select rides of 1 through 6, 12, 18 and 24 minutes. Each Hill Profile program is comprised of four periods: 1) Warm-Up, 2) Plateau, 3) Interval Training, and 4) Cool-Down.

The Lifestep trainer is unique in the fitness industry. Its patented, computerized interval training program has been scientifically demonstrated to yield more statistically significant cardiorespiratory improvement than steady-pace training.* The Hill Profile program offers "interval training with progressive overload." Not only does it offer the challenge of alternating periods of high and low intensity, but the levels of intensity become progressively more difficult during the course of the program.

Warm-Up Period: Gradually brings your heart rate into the lower portion of your Target Heart Rate Range (THRR) and increases respiration. Blood-flow to working muscles also increases.

Plateau Period: Increases your heart rate so that it is within your THRR. Take your pulse (HR check) at the end of the plateau period to ensure that you have entered your THRR.

Interval Training Period: Comprised of a series of hills and valleys, during this period, you are confronted with four successively higher hills. Each one is separated from the next by a valley or recovery period. Take your pulse at the end of the interval training period to ensure that you have stayed within your THRR.

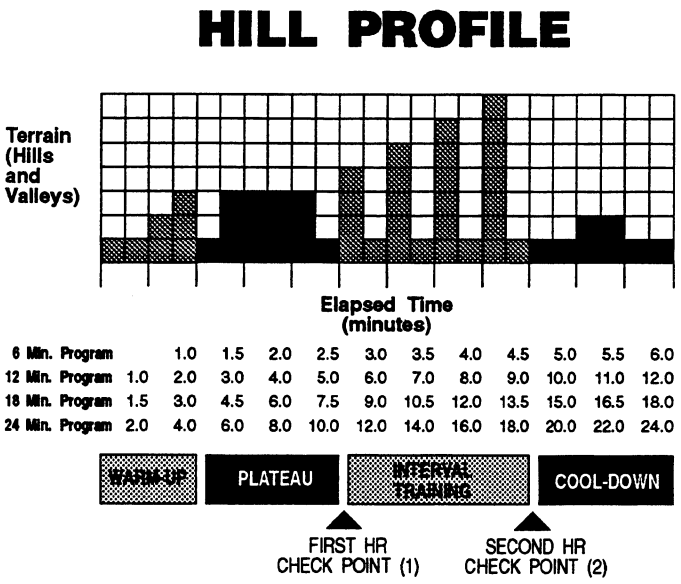
* Allen, D. and Pickens, D.W., Caloric Expenditure of Interval vs. Steady-State Training, Federation of American Societies for experimental Biology, 46(3):319, 1987.

Cool-Down Period: A reduction of step rate or resistance depending on you step action - Regular or Climbing. This exercise period gradually reduces your heart rate to the lower end of your THRR. The cool-down period allows your body to begin removing accumulated end products of exercise, such as lactic acid, which tend to build-up in muscles during your workout and contribute to muscle soreness.

> ***Heart Rate Check Points: You should check your heart rate near the end of the plateau period and at the end of the interval training period. You should always take your pulse at the times indicated to make sure that you are staying within your aerobic THRR.***

The Hill Profile Program (Figure 5) shows the effort level and recovery periods encountered during a Lifestep workout. Effort and recovery periods are simulated on the display console by columns of red and yellow lights in the LED matrix window. The columns move from right to left during the workout. The higher the column, the faster the pace or the greater the resistance, depending on your step action.

Figure 5: Hill Profile Program



FOR CARDIORESPIRATORY TRAINING:

(1) FIRST HEART RATE CHECK POINT -- At the first heart rate check point, your pulse should be between 75% - 80% of the theoretical maximum for your age category for cardiorespiratory training.

(2) SECOND HEART RATE CHECK POINT -- At the second heart rate check point, your pulse should be between 85% - 90% of the theoretical maximum for your age category for cardiorespiratory training.

FOR FAT LOSS TRAINING:

(1) FIRST HEART RATE CHECK POINT -- At the first heart rate check point, your pulse should be between 65% - 70% of the theoretical maximum heart rate for your age category for fat loss training.

(2) SECOND HEART RATE CHECK POINT -- At the second heart rate check point, your pulse should be between 70% - 75% of the theoretical maximum for your age category for fat loss training.

THE RANDOM PROGRAM

In Random, the computer randomly selects hill-and-valley terrain which varies with each and every workout. Over one million combinations are offered in an interval training format. Because step rates and resistance levels are greater in this program than in the Hill Profile program it is recommended that you set the Random program one or two levels lower than the level of intensity you would normally select on the Hill Profile program.

Heart Rate Check Points: You should check your heart rate near the end of the plateau period and at the end of the interval training period. You should always take your pulse at the times indicated to make sure that you are staying within your aerobic THRR.

THE MANUAL PROGRAM

This program provides steady-pace exercise with fixed step rates and resistance levels equal to that of the highest hill encountered on the Hill-Profile program at the same level of intensity. Because of the greater effort levels of this program, it is recommended that you set the Manual program about three to four levels lower than the level of intensity that you would normally select on the Hill Program.

Heart Rate Check Points: You should check your heart rate near the end of the plateau period and at the end of the interval training period. You should always take your pulse at the times indicated to make sure that you are staying within your aerobic THRR.

You can also design your own interval training program using the Manual mode by varying the level of intensity during the course of your workout. To do so, select a high level of intensity until you reach your maximum heart rate, then step at a lower level of intensity until your heart rate drops to the bottom of your particular THRR. Then, increase the level of intensity until you reach your maximum heart rate again. By repeating this process, you will be simulating your own hills and valleys.

How to Operate the Hill Profile, Random and Manual Programs

Operating your Lifestep is as easy as climbing stairs. There are just a few keys to press. Understanding how to operate the Hill Profile, Random and Manual programs is extremely important, so please read through this entire section before you execute any program on your Lifestep.

Stretching is an important first step in any type of physical activity. However, it is recommended that stretching be performed only after the muscles being stretched have been pre-warmed. A brief warm-up program on the Lifestep is a good way to prepare your legs for stretching. Stretching promotes blood circulation which results in greater muscle elasticity. This helps decrease the chance of muscular strain. For an illustrated description of stretching exercises, see Proper Stretching Techniques which begins on page 42.

Step 1: Press the Start key.

After you press the START-ENTER key, the weight LED will flash. Using the numeric keys, enter your current weight. Press the START-ENTER key.

Step 2: Select Exercise Program

The Program LEDs will flash. These keys are requesting you to choose one of the three Lifestep programs: Random,Hill or Manual. Select the desired program key and press START-ENTER.

Note: A Program is activated when its respective LED remains lit.

Step 3: Select Exercise Goal - Time, Floors or Calories

If you want to exercise In the HILL PROFILE program, simply press the flashing Hill key. The ELAPSED TIME LED will flash, requesting you to enter your program time of 1-6, 12, 18, or 24 minutes.

Note: The console does not accept Hill Profile programs of durations other than those listed above.

To access the Hill Profile program for 12 minutes, press 1 and then 2. The number 12 will then appear in the ELAPSED TIME window. Press the START-ENTER key.

If you want to exercise in the Random or Manual program for a **time duration**, simply press the flashing RANDOM or MANUAL program. The chosen program LED will remain illuminated. The Elapsed Time LED and Floors Climbed LED will flash. Press 1 for a workout based on TIME. The Elapsed Time LED will remain lit and the Elapsed Time window shows ":00". Then enter the workout duration from 1 to 60 minutes. Press the START-ENTER key.

If you want to exercise in the Random or Manual program for a **floors duration**, simply press the flashing RANDOM or MANUAL program. The chosen program LED will remain illuminated. The Elapsed Time LED and floors Climbed LED will flash. Press 2 for a workout based on floors. The Floors climbed LED will remain lit. Then, enter a floors goal from 1 to 999. Press the START-ENTER key.

If you want to exercise in the Random or Manual program for a **calories duration**, simply press the flashing RANDOM or MANUAL program. The chosen program LED will remain illuminated. The ELAPSED TIME, FLOORS CLIMBED, and TOTAL CAL LEDs will flash. Press 3 for a workout based on calories. The TOTAL CAL LED will remain lit. Then, enter a calories goal from 1 to 2000. Press the START-ENTER key.

Step 4: Select Step Action - Regular or Climbing

After you select an exercise goal, the Action LEDs will flash, prompting you to enter a desired step action - REGULAR or CLIMBING.

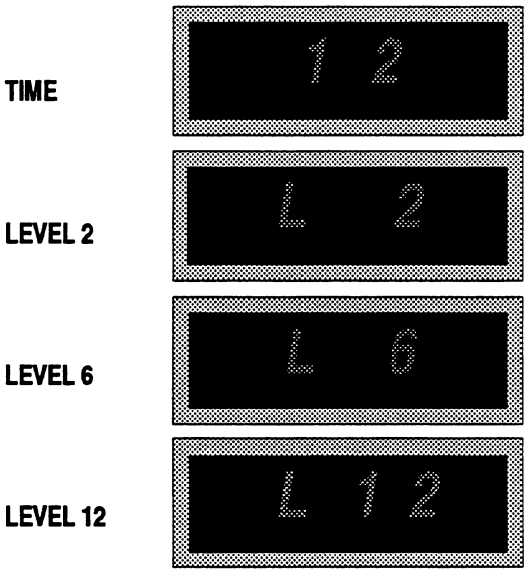
The REGULAR - FULL STEP ACTION results in the steps getting faster as the hills get higher.

The CLIMBING - SHORT STEP ACTION results in the steps becoming more difficult as the hills get higher.

The CLIMBING - SHORT STEP ACTION allows you to take short or full steps, whereas the REGULAR - FULL STEP ACTION was designed for a full step action.

Step 5: Select Level of Intensity (Difficulty)

After you select a step action, the level indicator LED below the window will flash requesting you to enter your level of intensity. The available levels are 1 through 12 for any of the three programs. Select a comfortable level for your workout. If you choose level 12, for instance, both digits must be pressed within 2 seconds of one another, or the second digit simply overrides the first digit as the selected exercise level. This means you could have inadvertently programmed 2 when what you really wanted was 12. Press the START-ENTER key after inputting level.



Step 6: Maintain the Floors Per Minute Rate While Using the Regular - Full Step Action:

It is very important that you maintain your Floors Per Minute Rate. You can maintain this rate by watching the FLOOR PER MINUTE GOAL and ACTUAL window. The floor per minute actual number should be equal or close to the floors per minute goal. If you are stepping above or below the floors per minute goal, the Floor/Min Goal will begin to flash. Also, you will hear "beeps" if you drop below your Floors Per Minute Goal. A Floors Per Minute goal is not displayed in the Climbing Action mode.

Step 7: Check Your Heart Rate

You should check your heart rate periodically during each exercise session to ensure that you are working within your THRR. (Suggested times to check your heart rate in the Hill Profile program are shown in Figure 5 on page 18.) To check your heart rate, continue stepping and use the Elapsed Time window to count 15 seconds.

DO NOT STOP STEPPING. Count the number of heart beats in 15 seconds. Convert this to beats per minute by multiplying by four. An alternative method is to count the number of beats in 10 seconds, then multiply this number by six. With either method, you get a good approximation of the number of heart beats in 1 minute.

Step 8: Changing Level of Intensity (Difficulty)

If your heart rate is above your THRR, reduce your level of intensity by entering a lower number on the keypad. If your heart rate is below your THRR, enter a higher number to increase the level of intensity. Do not change your workout intensity if your heart rate is within your THRR. You can change the level of intensity at any time during your workout by simply pressing a new number on the keypad.

How to Make Changes During Your Workout

You can change the level of intensity at any time by merely pressing a new number.

If, at any point during any program, you wish to switch to a different program (Hill Profile to Manual or Manual to Random, for instance), press CLEAR twice then enter the desired program. This clears the first program and lets you start a new one.

How to Work Out Properly

Range of Motion

You should begin stepping at a comfortable pace by taking full or short steps and keeping your back straight. Do not hold on to the console. The Lifestep trainer allows you to select a step height up to 16". You can vary your step height by simply changing your foot position on the anatomically designed pedals. The closer your feet are to the front of the pedal, the shorter the step height. Conversely, by placing your feet at the back of the pedal, a deeper step height results.

Also, your Lifestep is equipped with springs which allow for a cushioning effect. This feature encourages you to take full steps, thus maximizing your workout benefits.

Keeping the Pace

In the Regular Action mode, if you are unable to maintain the floor/min. goal, the Lifestep will "beep"and the floor/min. goal window will flash. You may change the exercise level by pressing 1 (slow, easy pace) to 12 (fast, difficult pace). If you do not change levels and the machine continues to "beep" you will automatically be dropped a level. The machine can recede in single level increments down to Level 1.

To acclimate your body to the Lifestep trainer, begin a gradual exercise regimen. At first, you may feel some soreness in the knees and legs. This soreness should subside. However, if the soreness continues and, or you feel pain, faint or short of breath, stop stepping and consult a physician.

How to Operate the Fit Test

The Lifestep FIT TEST program is another exclusive feature of this versatile aerobic trainer. Think of it as your "relative fitness score." Use the FIT TEST to monitor improvement in your endurance every 4 to 6 weeks. Your FIT TEST score will be a number which will allow you to compare your fitness level to others of your sex and age. (See Table 1 on page 27) It is also an estimate of your VO_2 max.

VO_2 is a combination of how well the heart supplies oxygenated blood to the exercising muscles and how efficiently these muscles are able to get the oxygen from the blood. It is the measurement regarded by physicians and exercise physiologists as the standard for aerobic capacity.

NOTE: To receive a proper FIT TEST score, you must be working within your training heart rate range of 65% of your theoretical maximum heart rate. The Lifestep will automatically determine if your are working within this range.

HOW THE FIT TEST WORKS

1. After pressing the START-ENTER key, the weight LED (user's weight) will flash. Use the numeric keys to enter your current weight and press START-ENTER.
2. Press the FIT TEST key.
3. A flashing AGE (user's age) appears next in the Data Entry window. Use the numeric keys to enter your age and press START-ENTER.
4. After entering your age a flashing SE (user's sex) appears in the Data Entry window. Press 1 for male or 2 for female, and press START-ENTER. This is necessary for accurate computation of the Fit Test score.
5. After entering your sex, a flashing L (user's level) will appear in the Data Entry window. You may select Fit Test effort levels from 1 to 12. The recommended effort levels for males are:

   Beginner: 2-5 Intermediate: 6-8 Advanced: 9-11 Expert: 12

   The recommended effort levels for females are:

   Beginner: 1-4 Intermediate: 5-7 Advanced: 8-10 Expert: 11
6. Begin your 3 minute Fit Test. You must maintain the floors per minute goal indicated in the Floors Per Minute Goal window. Also, you must maintain a 100% effort and step height for an accurate score.

7. After you have completed the Fit Test, use the Elapsed Time window to take your 15 second pulse. Using the numeric keys, enter your pulse.

8. After pressing the START-ENTER key, a figure will appear in the Data Entry window. Use Table 1 on page 27 to determine where you rank with others in your specific category.

FIT TEST TIPS

- ❒ The computer does not accept . . .
  - — 15 second pulse below 18 or above 55 beats per minute;
  - — body weights less than 74 or greater than 399 pounds;
  - — ages that are below 12 or exceed 99 years;
  - — data input that exceeds human potential. When this occurs, "ERR" appears in the Data Entry window.

- ❒ If you make an error when entering any FIT TEST information, you can correct it by re-entering the accurate data *BEFORE* you press the START-ENTER key.
- ❒ It is important to take your FIT TEST under similar circumstances every time. Heart rate is dependent on many factors including:
  - — amount of sleep the previous night (7 or more hours is recommended);
  - — time of day of the test;
  - — time you last ate (2 to 4 hours after your last meal is recommended);
  - — time since you last drank a liquid containing caffeine or alcohol, or smoked a cigarette (4 or more hours is recommended); and
  - — time since you last exercised (at least 6 hours is recommended).

For the most accurate FIT TEST results, perform the FIT TEST on three consecutive days and average the three scores.

YOUR RESTING HEART RATE IS IMPORTANT

Another excellent indicator of cardiorespiratory health is your resting pulse. An average resting pulse is approximately 72 beats per minute. A lower pulse indicates a stronger, healthier heart. Monitoring your resting pulse is an easy way to measure the effectiveness of your exercise program. Take your pulse each day at the same time, preferably upon awakening and before you get out of bed. As your Personal Exercise Plan (PEP) continues, you'll notice a decrease in your resting heart rate. Be patient. This improvement takes at least 8-10 weeks of training.

Table 1: FIT TEST Scoring Table

Fit Test Scoring Table (Estimated VO_2 Max)					
MEN	**AGE**				
RATING	**20-29**	**30-39**	**40-49**	**50-59**	**60-69**
Elite	61+	57+	55+	53+	50+
Excellent	55-60	52-56	50-54	47-52	44-49
Good	50-54	46-51	44-49	42-46	39-42
Above Average	44-49	41-45	39-43	36-41	33-38
Average	40-43	36-40	34-38	32-35	29-32
Below Average	34-39	31-35	29-33	26-31	23-28
Poor	29-33	25-30	22-28	20-25	18-22
Very Poor	<29	<25	<22	<20	<18

Fit Test Scoring Table (Estimated VO_2 Max)					
WOMEN	**AGE**				
RATING	**20-29**	**30-39**	**40-49**	**50-59**	**60-69**
Elite	54+	51+	48+	46+	44+
Excellent	48-53	45-50	43-47	41-45	39-43
Good	43-47	40-44	37-42	35-40	33-38
Above Average	37-42	34-39	32-36	30-34	28-32
Average	33-36	30-33	28-31	25-29	23-27
Below Average	28-32	24-29	22-27	20-24	18-22
Poor	22-27	19-23	17-21	14-19	12-17
Very Poor	<22	<19	<17	<14	<12

How to Choose the Correct Workout Level

Your Training Heart Rate Range determines the workout intensity you should select. You should choose a level of intensity (effort) that keeps your heart rate within your THRR. The chart for determining your THRR is on page 39.

There are twelve levels of intensity (difficulty) on the Lifestep aerobic trainer: Level 1 is the easiest, level 12 is the most difficult. The first few times you use the Lifestep trainer, select a short exercise program at a low intensity level. Check your heart rate at the recommended check points and adjust the level of intensity to keep your heart rate within your THRR.

As your condition improves, you will need to increase the intensity in order to stay within your training zone.

The Manual and Random programs provide more difficult workouts than the Hill Profile program. In the Random program, be sure to choose an exercise intensity that is at least two levels lower than what you would normally select on the Hill Profile program. On the other hand, if you choose the Manual program, choose an exercise intensity that is at least three times lower than what you would normally select on the Hill Profile program.

Table 2 (page 29) lets you compare the relative intensities of the three Lifestep computerized programs. As shown, Level 3 of the Manual program is far more difficult than Level 3 of the Hill Profile program and slightly more difficult than Level 3 on the Random program.

A scientific study comparing the Hill Profile and Manual programs suggests that the vast majority of users judge the Hill Profile program more enjoyable and less difficult, even though the number of calories burned during both programs in this study were the same.* This observation substantiates an important psychological phenomenon, i.e., users are more apt to stick to an interval training exercise plan than to a steady-pace exercise plan.

Allen, D. and Pickens, D.W., Caloric Expenditure of Interval vs. Steady-State Training, Federation of American Societies for Experimental Biology, 46(3):319, 1987.

Table 2: Relative Program Intensities

Comparison of relative levels of intensity of the three Lifestep exercise programs.

	Hill Profile	Random	Manual
Level of Intensity (Pedal Resistance)	3-4	2	1
	5-6	3	2
	7-8	4	3
	9-10	5-6	4
	11-12	7-8	5
		9	6
		10	7
		11	8
		12	9
			10
			11
			12

Interpretation: Level 3 or 4 in the Hill Profile program is equivalent to Level 2 in the Random program and Level 1 in the Manual program. In other words, it is more difficult to step at the same level of intensity in the Manual program than in the Random program, and the Random program is more difficult at the same level of intensity than the Hill Profile program.

The programs of the Lifestep 9100 aerobic trainer have graduated levels of intensity to simulate a regimen through hills and valleys. As you encounter the hills in various programs, the stepping rate or the pedal resistance, depending on your step action, will increase for the duration of the hill shown in the LED Matrix window. This window graphically depicts the upcoming terrain giving you a preview of what you are about to encounter.

Additionally, the Lifestep model 9100 has different levels of intensity or difficulty. These levels simulate the effect of encountering a series of hills whose inclines vary based on the level of intensity selected. The hills encountered on Level 1 are easiest, with those on Level 12 being the most difficult.

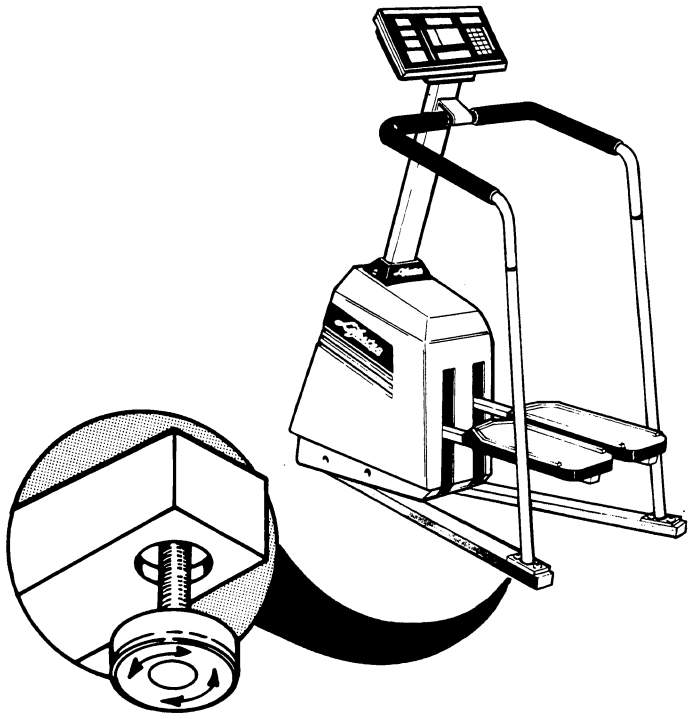
How to Level the Lifestep 9100 Aerobic Trainer

Your Lifestep model 9100 may have to be leveled, depending on the surface on which the machine is placed.

After placing the Lifestep in its intended location for use, check the stability of the unit. If the Lifestep 9100 is not stable, adjust either leveler by turning it clockwise or counterclockwise until the rocking motion is diminished.

NOTE: Only one leveler needs to be turned.

Figure 6: Leveling the Lifestep



How to Care for Your Lifestep Aerobic Trainer

The Lifestep model 9100 aerobic trainer is backed by the engineering excellence of Life Fitness, and is one of the most rugged and trouble-free pieces of exercise equipment on the market today. As one of the most popular stairclimbers in health clubs across the country, the Lifestep regularly stands up to marathon use -- 18 hours a day, 7 days a week.

Here are some preventative maintenance tips which will keep your Lifestep aerobic trainer operating at its best:

- ❒ To ensure optimal function of the Lifestep, keep it in a cool, dry place.
- ❒ Clean the top surface of the pedals daily.
- ❒ Keep the display console free of fingerprints and salt buildup caused by sweat. Use a 100% cotton cloth lightly moistened with water and mild liquid detergent. Other fabrics, including paper towels, may scratch the surface.
- ❒ Long fingernails may damage the surface of the console. We recommend that you use the pad of your finger to press the selections on the keypad.
- ❒ Thoroughly clean the housing weekly.

NOTE: When cleaning the exterior of the unit, a non-abrasive cleanser and soft cotton cloth are strongly recommended. At no time should cleanser be applied directly to any part of the equipment. Instead, place the non-abrasive cleaning solution on a soft cloth and wipe down the unit.

How to Solve Operating Problems

Symptom: No Power

- ❒ Check connection at wall outlet.
- ❒ Check on/off switch.
- ❒ Massage the keypad with your fingertips.
- ❒ Disconnect the display connector and reconnect.
- ❒ Check circuit breaker, above on/off switch.

Symptom: Erratic Display

- ❒ Check connection at wall outlet.
- ❒ Disconnect the display connector and reconnect.

Symptom: Keys do not respond

- ❒ Check connection at wall outlet.
- ❒ Massage the keypad with your fingertips.
- ❒ Disconnect the display connector and reconnect.

If You Have A Problem . . .

STEP 1:

❒ **If possible, verify the symptom.**

Speak with the person who encountered the problem. Sometimes, the problem turns out to be unfamiliarity with the product's features.

STEP 2:

❒ **Locate and document the serial number of the unit.**

The serial number of your Lifestep aerobic trainer is located on the underside of the frame just below the left vertical handle.

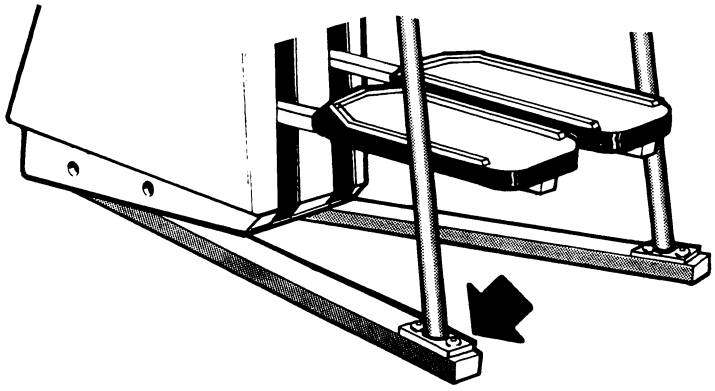
STEP 3:

❒ **Contact The Life Fitness Product Support Center.**

Toll Free: 800-351-3737 (United States and Canada).
In Illinois: 708- 451-0036.
FAX: 708-451-4137.
Or write: Life Fitness Product Support,
10601 W. Belmont Avenue,
Franklin Park, IL 60131

Please have the serial number of the product and the symptom ready for the Product Support Specialist who will be assisting you. This information is necessary for us to be able to help solve any problems you may be encountering

Figure 7: Serial Number Location



Lifestep Model 9100 Product Specifications

All specifications are for a fully-assembled Lifestep model 9100 aerobic trainer.

Physical:
- Length ..... 42 inches
- Width ..... 29 inches
- Height ..... 62 inches
- Color ..... Gray with red & black accents
- Weight ..... 197 lbs.

Shipping Dimension:
- Length ..... 38 1/2 inches
- Width ..... 34 3/ 4 inches
- Height ..... 38 1/2 inches
- Weight ..... 247 lbs.

Electrical:
- Required Power source ..... 120 volts, 60 Hz., 1 Amp. Max

APPENDIX

How to Choose an Aerobic Training Method

How hard you work out during your Lifestep exercise session depends on your fitness goals and physical condition. Your PEP (Personal Exercise Plan) should fit your goals and preferences. If you don't enjoy your workout you won't continue. Basically, design a workout that you can live with. Pages 48-50 explains how to develop your Personal Exercise Plan.

This section describes the two aerobic training methods that are available on the Lifestep aerobic trainer - interval training and steady-pace training.

NOTE: A Lifestep Training Log is included at the back of this manual so you can record information on your progress.

INTERVAL TRAINING

Interval training, which is offered by selecting the Hill Profile program or Random program, provides periods of high-effort aerobic activity separated by regular intervals of low-intensity exercise. By varying the work load throughout the exercise session in this way, your heart rate will range between the high and low ends of your THRR. You can also change the levels of intensity during your program by simply pressing a numbered key which is higher or lower than the one you entered at the beginning of your exercise program.

The Lifestep aerobic trainer is unique in the fitness industry. Its patented, computerized interval training program has been scientifically demonstrated to yield more statistically significant cardiorespiratory improvement than steady-pace training. The Hill Profile program "interval training" offers the challenge of alternating hills and valleys, with the hills and valleys becoming progressively more difficult during the course of the program.

Interval training is extremely popular with individuals ranging from elite athletes, whose performance depends on power and speed, to patients in medically supervised rehabilitation facilities.

STEADY-PACE TRAINING

For those who prefer steady-pace training, it is available on the Lifestep trainer. It is activated by the Manual key on the display console and provides a steady, fixed step rate or level of resistance depending on your preferred step action - REGULAR or CLIMBING. You can create your own program using the Manual program by simply changing

during the course of your program. For example, if you are stepping in the Manual program at Level 4 and wish to increase your stepping rate or level of resistance, merely press a numbered key which is greater than 4. Likewise, you can select a lower number.

Some exercise physiologists believe in the combined use of both steady-pace and interval training. The Hill Profile, Manual and Random programs offer this variety. If your time is limited, however, we recommend that you choose the Hill Profile program because it can provide greater cardiorespiratory improvement per unit of time than steady-pace training.

If for some medical or physiological reason you have been advised to maintain a steady heart rate while you are exercising, select the Manual program. It is easier to maintain a consistent heart rate using the Manual program than the Hill Profile or Random programs.

If your goal is fat loss, you may initially wish to use the Manual program at a low level of intensity and step for a longer period of time at each exercise session.

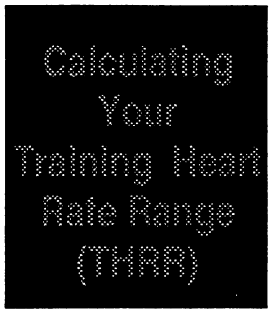
See page 20 for instructions on how to operate the Lifestep Hill Profile, Random and Manual programs.

How to Exercise Effectively

Exercising too hard is as ineffective as not working hard enough. In fact, overdoing it can be harmful. For an effective workout, determine your optimal workout frequency, duration and intensity and stick to it!

To approximate your Training Heart Rate Range (THRR), you must first calculate your theoretical maximum heart rate. Subtract your age from 220. (This formula is recognized by the American College of Sports Medicine as a method for determining your theoretical maximum heart rate.*) For example, if you are 35 years old, your theoretical maximum heart rate is 185. If your goal is fat loss, you can establish your THRR by multiplying this number (185) first by 65% to establish the lower limit, then by 75% to establish the upper limit. If your goal is cardiorespiratory fitness, you can establish your THRR by multiplying 185 first by 75% to establish the lower limit, then by 90% to establish the upper limit.

Figure 8 (page 39) or Table 3 (page 51) can be used to determine your theoretical maximum heart rate and THRR for your age category.



Examples:

Cardiorespiratory training for age 35:

Lower limit: (220 less 35 = 185) x .75 = 139 beats/min.

Upper limit: (220 less 35 = 185) x .90 = 167 beats/min.

Fat Loss Training Range for age 35:

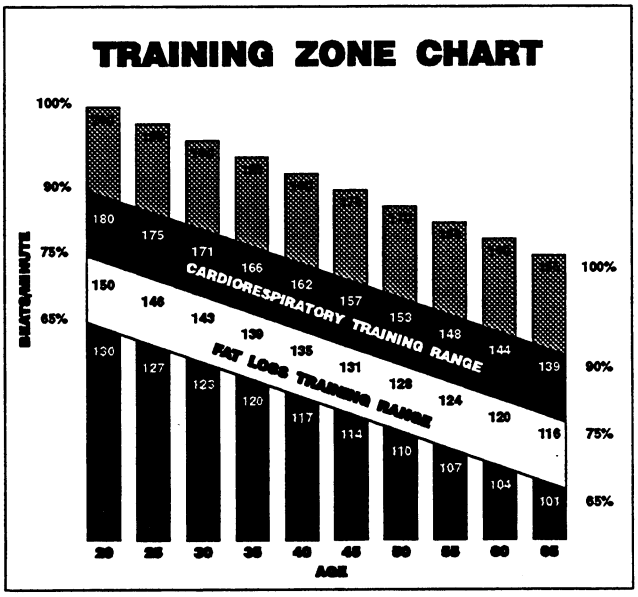
Lower limit: (220 less 35 = 185) x .65 = 120 beats/min.

Upper limit: (220 less 35 = 185) x .75 = 139 beats/min.

NOTE: A stress test administered by your doctor is the most accurate method of determining your maximum heart rate and overall cardiorespiratory condition. We strongly recommend that you see your doctor before beginning any exercise program, especially if you have a history of high blood pressure, heart problems or if you are over the age of 45. You and your doctor can decide whether a maximum stress test is advisable.

By making sure your heart rate stays within this range during your workout, you will achieve optimal training benefits with minimal stress to your cardiorespiratory system. As your fitness program progresses, your aerobic capacity will build and your body will begin to show the benefits of what is referred to by fitness experts as "the training effect."

Figure 8: Training Heart Rate Range (THRR) Chart



CHECKING YOUR PULSE

For best results, stay within your THRR during exercise. To do this, check your pulse periodically during your workout. (See Figure 5 on page 18 for the times to check your heart rate during the Hill Profile program.)

You may wish to use an electronic pulse meter, but your own two fingers will suffice. Your pulse can be conveniently monitored in two locations; (1) on your neck, next to the Adam's apple beneath the chin or (2) on the thumb side of the inside of your wrist. To monitor your pulse, hold your index and middle finger together against either site. (The neck site is easiest during exercise.)

CAUTION: Do not press too hard, especially when taking a neck pulse. Excessive pressure can reduce blood flow, and cause the heart to slow down.

A 15-second count is recommended. Your heart rate per minute is 4 times the 15-second count.

WARMING UP AND COOLING DOWN

A warm-up regimen on your Lifestep trainer gradually increases your pulse rate. This promotes blood flow to working muscles and meets the body's increased demand for oxygen. The length of the warm-up period for the standard Hill Profile program will vary depending upon the duration of the program you selected. The warm-up period is 1 minute if you select a 6 minute program, 2 minutes in a 12 minute program, 3 minutes in an 18 minute program,1/2 and 4 minutes in a 24 minute program.

The cool-down period, which lasts 1 minute in a 6 minute program; 2 minutes in a 12 minute program; 3 minutes in an 18 minute program; 4 minutes in a 24 minute program, decreases the activity level of your heart until it has returned to approximately 55% of its theoretical maximum rate. A proper cool-down period assures sufficient blood flow to the muscles, which helps to remove the end products of exercise, including lactic acid. Accumulation of these end products is a major cause of muscle soreness. The harder the workout, the longer the cool-down should be.

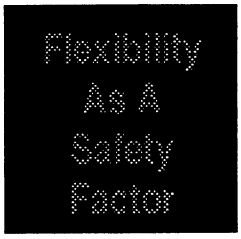
Research suggests that in order to minimize the chance of injury, stretching exercises should be performed after the cool-down period, while muscles and joints are still warm. This is especially true if you follow your aerobic workout with a weight training session. Proper stretching techniques are illustrated on pages 42 and 43.

The Hill Profile programs of 6 minutes and longer include a built-in warm-up and cool-down period,however the Random and Manual programs do not. When using the Random workload, decrease your effort level at the beginning and final minutes of the program in order to provide effective warm-up and cool-down periods.

CAUTION: Many physicians believe proper cool-down is very important to avoid heart failure, even in people with no prior history or symptoms of heart problems.

PROPER STRETCHING TECHNIQUES

Stretching is perhaps the most neglected element of physical conditioning, because people do not associate flexibility with the more glamorous aspects of exercise -- speed, strength and a lean body appearance. However, without significant flexibility, real gains in fitness are unnecessarily difficult to achieve and maintain.



Limber joints, muscles, and connective tissues provide the freedom of motion that makes exercise easier and more enjoyable to perform and lessens the risk of injury. Without proper, consistent stretching, ligaments and tendons can become taut and shortened with decreased circulation. These inflexible tissues are more prone to chronic soreness or rupture than loose, stretch-conditioned tissues. And, nothing is more discouraging than nagging injuries. Stretching helps people of all ages and levels of fitness prepare themselves for the exertion required to participate in a program of regular muscular and aerobic training.

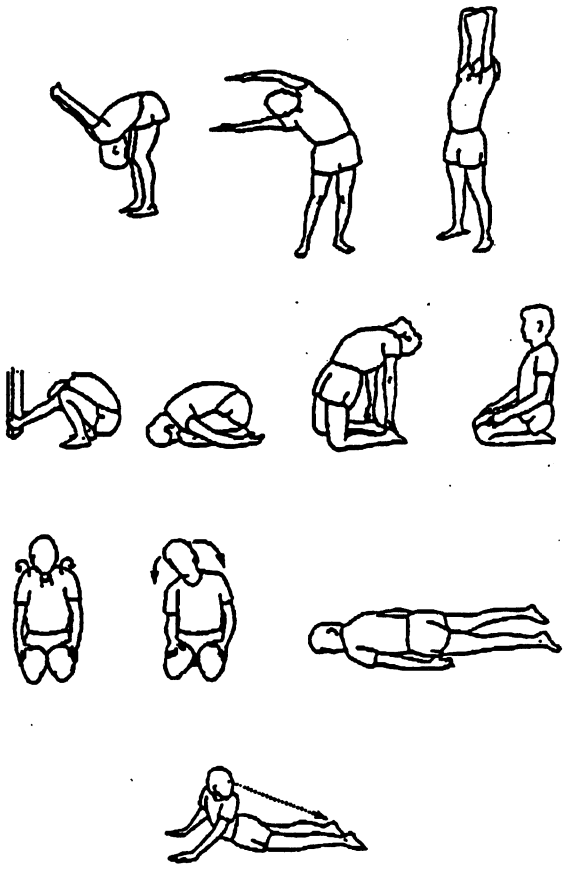
See pages 42 and 43 for illustrations of recommended stretching exercises.

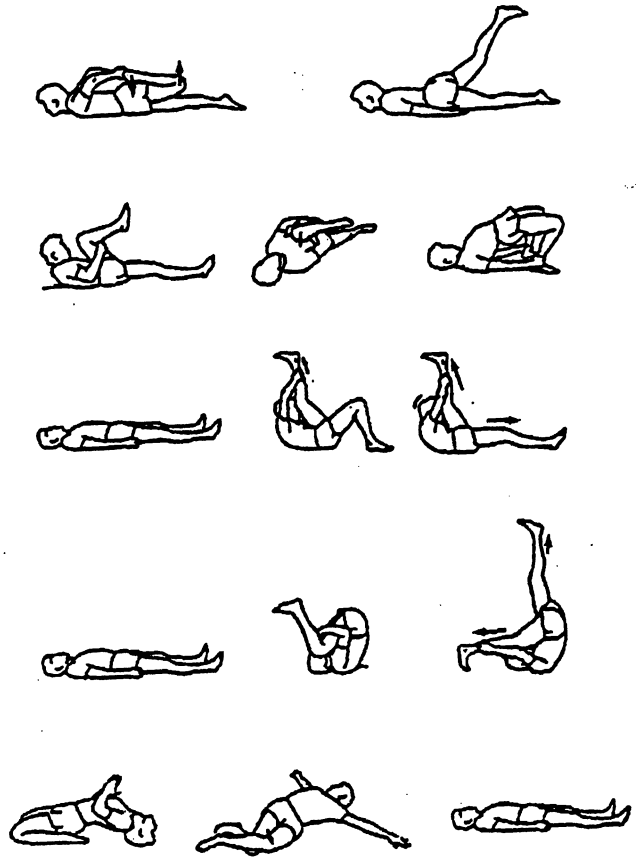
Stretching Exercises

Follow the sequence indicated in these stretching illustrations.

When stretching, remember to move slowly into a stretch to where you feel resistance, but not pain. Hold that position and breathe deeply and slowly for 5-10 seconds. Remember to stretch both sides of your body when the illustration calls for arm or leg stretching. When the illustration calls for shoulder rotation, perform five rotations in each direction.

Figure 9: Stretching Exercises:





TIPS FOR GOOD STRETCHING RESULTS

Stretching is a special discipline that requires concentration and patience for best results. Follow these tips and practice the stretches shown in the preceding illustrations at least 3 times a week for 15 minutes per session. You'll progress safely and surely.

1. **DRESS COMFORTABLY.** Wear loose-fitting, soft fabric clothes without restrictive belts, elastic or large buttons or buckles. Breathable cotton or softly woven wool is preferable to synthetic cloth. Go without shoes or slippers when stretching.

2. **STRETCH SLOWLY.** Move in and out of your stretches with slow, controlled motions and hold in a static position when you've stretched as far as comfortable. Fast, bouncy, ballistic motions can actually signal the muscles to contract, and defeat the purpose of stretching. Concentrate on the body part you are working. You can close your eyes and imagine your muscles loosening slowly and gradually.

3. **PRACTICE ABDOMINAL BREATHING.** Learn to breathe from your diaphragm, so that your stomach, rather than your rib cage and shoulders, rises and falls with each breath. Abdominal breathing encourages relaxation, lessens muscular tension and helps lower blood pressure.

4. **LEARN YOUR "STRETCHING ZONE."** Stretch gradually to the point that you feel resistance, but never to the point of pain, and never use muscular effort to increase a stretch. Some discomfort is natural, but the gentle forces of gravity and your body weight will determine the limits of your safe, effective "stretching zone."

5. **START EASY.** Start each session with the stretches you find easiest. This will help you relax, concentrate and warm up for the more difficult parts of your routine.

6. **EMPTY STOMACHS MAKE STRETCHING EASIER.** You'll find your stretching routines easier and more pleasant if you do them on an empty stomach. This refers to liquid as well as solid foods.

7. **PRE- AND POST-WORKOUT STRETCHES.** Always stretch in order to warm and loosen tissues in preparation for exertion. And, since muscles tighten up after exertion, stretch afterwards to promote circulation and minimize stiffness from lactic acid build-up. You don't have to perform all the stretches pictured on the preceding pages before and after you work out, but be sure to perform those that most directly effect the muscles you use during exercise.

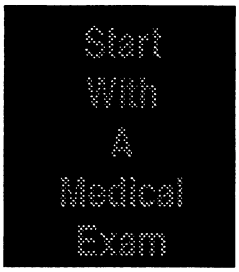
Do's and Don'ts for Minimizing Soreness and Muscular Stress

The following do's and don'ts will help reduce the chance of soreness and increase the effectiveness of your workout.

- ❒ **DO OBTAIN PROPER MEDICAL CLEARANCE PRIOR TO STARTING YOUR AEROBIC EXERCISE PROGRAM BY HAVING A PHYSICAL EXAM.**
- ❒ Do set realistic goals and objectives.
- ❒ Do exercise within your THRR.
- ❒ Do warm up and cool down properly.
- ❒ Do stretching exercises before you begin your Lifestep program.
- ❒ Do stretching exercises after you complete your cool-down.
- ❒ Don't increase intensity by more than one level per week.
- ❒ Don't increase intensity and duration at the same time.
- ❒ Don't overextend yourself in hot and/or humid weather.

How to Stay Motivated or "Staying With It."

Maintaining consistent exercise habits is a big challenge. Adherence to a training program gives you tremendous rewards. Once you begin to notice how much better you look and feel, you will wonder how you ever got along without a regular exercise program. You'll look forward to your next workout.



The physiological and psychological benefits are not immediately apparent. Sometimes it is hard to stay motivated until you begin to see results. The following tips are a few of the more popular and effective strategies used by successful athletes, coaches and sports physiologists to maintain a high degree of motivation.

1. ***Be Responsible.*** When it comes to the bottom line, you make the decision whether to exercise or watch TV, whether to refuse that extra pastry or to indulge. While the pressures of daily life often seem to force you into putting off your exercise, remember that it's your health that's concerned and you can say "yes" or "no" to the temptation to pass up working out "just this one time."

2. ***Be Disciplined.*** Discipline is the day-to-day ability to make the health-conscious decision every time you have a choice. It requires reminding yourself of the image you've created mentally of how you want to be, or how you want to look, and consistently working on your reinforcement of that image through the right actions. A routine time and place for exercise is a simple first step. You might even consider writing down your exercise session in your daily appointment book, as if it were a business appointment. This will ensure that other activities will not interfere.

3. ***Rehearse Mentally.*** Visualizing the actions of exercising and creating mental pictures of yourself in peak physical condition, enjoying the benefits of vibrant physical health will program you toward fitness success. Many athletes and performers actually rehearse their skills and shows with mental pictures prior to taking the field or walking on stage. It prepares them for the activity by eliminating apprehension and makes the activity more exciting, and even more enjoyable.

4. ***Gain Fitness Knowledge.*** The press and broadcast media are constantly full of new diets, exercise plans, product descriptions and testimonials about state-of-the-art health programs. There is so much to learn, and so many people and companies are making claims for their own particular offerings, that you must become a shrewd student of fitness to decipher what works best for you. Read authoritative

periodicals by expert authors. Attend seminars and trade shows. Evaluate each new product and system you encounter against what you have already learned to be accurate information.

5. *Be Realistic.* The degree of endurance, strength and figure appeal you can reach is always determined by your genetic potential, your fitness program and your environment. Don't compare yourself just to top athletes or celebrities. Judge real development by improvement from where you start. You will have a sense of pride and accomplishment when you achieve goals you have set for yourself, and nothing is more motivating than success.

6. *Enlist the Support of Family and Friends.* Tell those close to you about your fitness goals and ask them to support your efforts. Working out with a friend can produce amiable challenges and be twice as much fun as exercising alone.

How to Develop Your Personal Exercise Plan (PEP)

No two people are exactly alike, and therefore, no two Personalized Exercise Plans should be identical. People vary widely in their health and fitness status. Their goals, motivation, age, physical condition, exercise experience and time constraints are different. That's why using the Lifestep aerobic trainer is an ideal form of exercise. It is designed to deliver a computerized workout tailored specifically to your individual training capacity.

This section provides the general guidelines you need to develop your PEP. Remember that you are your own best coach, since you know your limitations and expectations better than anyone.

The American College of Sports Medicine and American Medical Association have established medical screening guidelines for exercise, and we strongly recommend that you consider the start of your PEP as an appropriate time to see your physician.

Medical clearance for use of the Lifestep aerobic trainer should definitely be obtained by individuals over 45 who have a major risk factor for coronary disease, such as heart disease, high blood pressure, high cholesterol levels, cigarette smoking or a family history of heart disease. Medical clearance should be obtained by all persons, regardless of age, with cardiorespiratory disorders, diabetes, bone and/or joint disease, or persons who have had any symptoms of coronary disease.

> ***In general, anyone starting a vigorous exercise regimen should see a physician for a medical exam. The extent of the exam will depend on the physician's preliminary evaluation of the individual's health status.***

PLANNING YOUR AEROBIC WORKOUT

YOUR GOALS:
Goals determine the direction and type of exercise plan that is right for you. An individual wishing to reduce his or her risk of heart disease will train less strenuously than a competitive athlete.

There are two major goals of aerobic exercise:

1. Cardiorespiratory improvement
2. Fat loss

Varying the frequency and intensity of the aerobic workout changes the focus from one goal to the other. High intensity aerobic exercise for

shorter periods of time promotes cardiorespiratory improvement, and burns mostly muscle glycogen as fuel. Low intensity aerobic exercise for longer periods of time promotes fat loss, because these longer periods of exercise burn more calories from stored fat.

If you are working to reduce the probability of heart disease or improve endurance, your goal is to build a stronger heart and lungs (cardiorespiratory improvement). By expanding lung capacity, your body's intake and utilization of oxygen is increased. Regular aerobic exercise accomplishes this and improves muscle endurance at the same time. (See page 39 for a heart rate training zone chart with suggested heart rates for fat loss and cardiorespiratory training.)

FIT GUIDELINES

FIT stands for FREQUENCY of exercise, INTENSITY of exercise and the amount of TIME (duration) you spend exercising. These are the three variables in designing an effective Personal Exercise Plan (PEP). Here's how to use the FIT guidelines to develop your PEP:

FREQUENCY. . .refers to how many times you use your Lifestep trainer each week. If your objective is to improve cardiorespiratory fitness, you should exercise on the Lifestep at least three times a week, with no more that two days between workouts. At first, you should give your muscles a chance to adapt to increased activity.

When you begin your FIT regimen, do not exercise more than once every other day. This should prevent muscle soreness and fatigue. Even after you have progressed sufficiently, the American College of Sports Medicine still recommends that your workout not exceed 5 times per week. Increased frequency yields minimal additional cardiorespiratory improvement and increases the risk of muscle strain. Only highly trained, competitive athletes should consider daily workouts. However, if your goal is fat loss, you should exercise more frequently, for longer periods of time, at a lower level of intensity.

INTENSITY. . .refers to how hard you work your heart. A heart rate of 75% of your theoretical maximum heart rate is the threshold above which optimum cardiorespiratory training occurs for those who are medically fit. 90% of your theoretical maximum heart rate is a safe upper limit for these same people.* Select a level of intensity that puts your heart rate between 75% and 90% of your theoretical maximum for cardiorespiratory improvement. Beginners will want to exercise at a heart rate which is closer to 75% while highly trained athletes may want to exercise closer to 90% of the theoretical maximum heart rate.

See Table 3 on page 51 for an approximation of the Theoretical Maximum Heart Rate and your Training Heart Rate Range (THRR) for your age category.

Adjust the intensity (level) of your workout to keep your heart rate within its most effective range. You will find that it is easier to step at a level of intensity on the Hill Profile program than at that same level on the Manual program. Table 2 on page 29 compares the intensity levels of the three Lifestep programs.

TIME. . .refers to the number of minutes you spend exercising within your THRR. Optimal cardiorespiratory and endurance improvements come with prolonged use of 12 to 24 minute workouts. Beginners might start with the 6 or 12 minute Hill Profile program. As you adapt, extend the duration of your workout. The 18 or 24 minute Hill Profile programs are available for this purpose. Be sure to keep your heart rate within your THRR by adjusting the intensity level.

> ***It is recommended that those just beginning to use the Lifestep aerobic trainer, even if in excellent condition, start with the standard Hill Profile program.***

If your objective is **FAT LOSS**, it is better to step for a longer duration. You will find that a lower level of intensity allows you to step longer. You can increase the intensity as you progress. A heart rate range of 65% to 75% of the theoretical maximum heart rate is the preferred range for fat loss training.

* American College of Sports Medicine, Guidelines for Exercise Testing and Prescription, Third Edition (Lea & Febiger: Philadelphia, 1986), p. 32.

Table 3: Training Heart Rate Range (THRR) for Fat Loss and Cardiorespiratory Improvement

Age	Max HR*	65% HR	75% HR	90% HR	Optimal Training HR**
20	200	130	150	180	160
21	199	129	149	179	159
22	198	129	148	178	158
23	197	128	148	177	158
24	196	127	147	176	157
25	195	127	146	176	156
26	194	126	145	174	155
27	193	125	145	174	154
28	192	125	144	173	154
29	191	124	143	172	153
30	190	124	142	171	152
31	189	123	142	170	151
32	188	122	141	169	150
33	187	122	140	168	150
34	186	121	139	167	149
35	185	120	139	167	148
36	184	120	138	166	147
37	183	119	137	165	146
38	182	118	136	164	146
39	181	117	136	163	145
40	180	117	135	162	144
41	179	116	134	161	143
42	178	116	133	160	142
43	177	115	133	159	142
44	176	114	132	158	141
45	175	114	131	158	140
46	174	113	130	157	139
47	173	112	130	156	138
48	172	112	129	155	138
49	171	111	128	154	137
50	170	111	127	153	136
51	169	110	127	152	135
52	168	109	126	151	134
53	167	109	125	150	134
54	166	108	124	149	133
55	165	108	124	149	132
56	164	107	123	148	131
57	163	107	122	147	130
58	162	106	121	146	130
59	161	105	121	145	129
60	160	105	120	144	128
61	159	102	119	143	127
62	158	101	118	142	126
63	157	101	118	141	126
64	156	100	117	140	125
65	155	99	116	140	124
66	154	99	115	139	123
67	153	98	115	138	122
68	152	99	114	137	122
69	151	99	113	136	121
70	150	98	112	135	120

See footnotes on page 52.

*Theoretical maximum heart rate is recognized by the American College of Sports Medicine.

** Optimal training heart rate is hypothetical, based on an average person in the population; however, exercising at a specific heart rate is a precise determination that can only be made by a qualified medical personnel.

A greater percentage of calories are burned when you average between 65% and 75% of your theoretical maximum heart rate . Fat is burned best when there is plenty of oxygen available in the blood. Working out at a lower heart rate for a longer period of time tends to optimize the amount of fat burned. Lower intensity exercise allows you to work out longer thus allowing you to burn more *total* calories.

*American College of Sports Medicine, Guidelines for Exercise Testing and Prescription (Lea & Febiger: Philadelphia 1986). p. 32

Table 4: Weight Conversion Chart (Kilograms to Pounds)

kgs.	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.	lbs.
34	75	48.5	107	63	139	77.5	171	92	202	106.5	234
34.5	76	49	108	63.5	140	78	172	92.5	204	107	235
35	77	49.5	109	64	141	78.5	173	93	205	107.5	237
35.5	78	50	110	64.5	142	79	174	93.5	206	108	238
36	79	50.5	111	65	143	79.5	175	94	207	108.5	239
36.5	80	51	112	65.5	144	80	176	94.5	208	109	240
37	81	51.5	113	66	145	80.5	177	95	209	109.5	241
37.5	83	52	114	66.5	146	81	178	95.5	210	110	242
38	84	52.5	116	67	147	81.5	179	96	211	110.5	243
38.5	85	53	117	67.5	149	82	180	96.5	212	111	244
39	86	53.5	118	68	150	82.5	182	97	213	111.5	245
39.5	87	54	119	68.5	151	83	183	97.5	215	112	246
40	88	54.5	120	69	152	83.5	184	98	216	112.5	248
40.5	89	55	121	69.5	153	84	185	98.5	217	113	249
41	90	55.5	122	70	154	84.5	186	99	218	113.5	250
41.5	91	56	123	70.5	155	85	187	99.5	219	114	251
42	92	56.5	124	71	156	85.5	188	100	220	114.5	252
42.5	94	57	125	71.5	157	86	189	100.5	221	115	253
43	95	57.5	127	72	158	86.5	190	101	222	115.5	254
43.5	96	58	128	72.5	160	87	191	101.5	223	116	255
44	97	58.5	129	73	161	87.5	193	102	224	116.5	256
44.5	98	59	130	73.5	162	88	194	102.5	226	117	257
45	99	59.5	131	74	163	88.5	195	103	227	117.5	259
45.5	100	60	132	74.5	164	89	196	103.5	228	118	260
46	101	60.5	133	75	165	89.5	197	104	229	118.5	261
46.5	102	61	134	75.5	166	90	198	104.5	230	119	262
47	103	61.5	135	76	167	90.5	199	105	231	119.5	263
47.5	105	62	136	76.5	168	91	200	105.5	232	120	264
48	106	62.5	138	77	169	91.5	201	106	233		

Lifestep Training Log

Session No.	Date	Resting Heart Rate	Body Weight	Program Selection / Level		Length of Ride	Heart Rate #1	Heart Rate #2	Fit Test Score*	Comments
1	3/1	70	185	Hill	3	12 min.	108	143	No	Felt great starting, but fatigued too fast.
2	3/2	72	184½	Hill	3	12 min.	110	152	No	A half pound lost! Yeah!
3	3/4	71	184	Hill	4	18 min.	109	150	No	Felt guilty about missing yesterday. 6 tough extra mins.
4	3/5	70	184	Man.	4	12 min.	108	149	46	NOT BAD: That's in the "good" range for a 45 yr. old like me.
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

*Take 3 days consecutively and average. Measure every 4 to 6 weeks.

Session No.	Date	Resting Heart Rate	Body Weight	Program Selection / Level		Length of Ride	Heart Rate #1	Heart Rate #2	Fit Test Score*	Comments
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

*Take 3 days consecutively and average. Measure every 4 to 6 weeks.